FESTOOL

DS 400 Q
DS 400 EQ

Instruction manual — Delta Sander

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IMPORTANT: *Read and understand all instructions before using.*

Guide d'utilisation — Ponceuse delta

Page 7

IMPORTANT: *Lire et comprendre toutes les instructions avant de démarrer les travaux.*

Manual de instrucciones — Lijadora en delta

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IMPORTANTE: *Lea y comprende todas las instrucciones antes de usar.*

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GENERAL SAFETY RULES

WARNING! Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

Work area

1 Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.

2 Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.

3 Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Electrical safety

4a Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

4b Double insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation ⧈ eliminates the need for the three wire grounded power cord and grounded power supply system.

5 Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.

6 Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

7 Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

8 When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

Personal safety

9 Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

10 Dress properly. Do not wear loose clothing or jewellery. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewellery, or long hair can be caught in moving parts.

11 Avoid accidental starting. Be sure switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.

12 Remove adjusting keys or switches before turning the tool on. A wrench or key that is left attached to a rotating part of the tool may result in personal injury.

13 Do not overreach. Stand on both feet an keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.

14 Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool use and care

15 Use clamps or other practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

16 Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.

17 Do not use tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.

18 Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.

19 Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

20 Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.

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21 Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.

22 Use only accessories that are recommen-ded by the manufacturer for your model. Accessories that may be suitable for one tool, may become hazardous when used on another tool.

Service

23 Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

24 When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorised parts or failure to follow Maintenance instructions may create a risk of electric shock or injury.

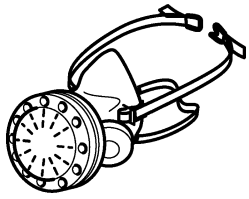
WARNING

Various dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

The risk from these exposures varies, depending on how often you do this type of work.

To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.



Technical data		**DS 400 Q**	**DS 400 EQ**
Wattage	W	200	200
No load speed	rpm	13 000	6 000 - 13 000
No. of strokes	spm	26 000	12 000 - 26 000
Sanding stroke	mm	2.0	2.0
Sanding base (delta form)	mm	100 x 150	100 x 150
Weight	kg	1.3	1.3
Safety llevel		⧈ UL 745, CSA C22.2 No. 745	

1 Symbols

V	volts
A	amperes
Hz	hertz
W	watt
∼	alternating current
n_0	no load speed
⧈	Class II Construction
rpm	revolutions per minute
spm	strokes per minute

2 Intended use

The sanders are designed for sanding wood, plastic, composite materials, paint / varnish, filling material and similar materials. Metal and materials with an asbestos content must not be processed with these tools.

The machine is particularly suitable for processing smaller surfaces and overhead work because of its size, its weight and its output.

The machines must not be damp nor operated in a damp environment for electrical safety reasons. The machines may only be used for dry sanding.

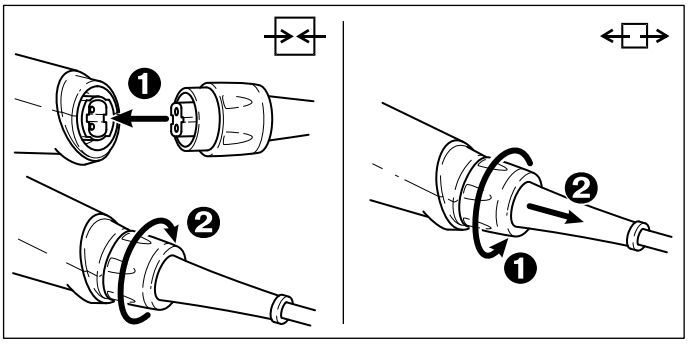
The user bears sole responsibility for any damage or accidents resulting from incorrect use.

3 Electrical connection and operation

The mains voltage must correspond with the voltage on the rating plate!

See the following Fig. for connecting or disconnecting the power cord of the tool.

⚠WARNING Always switch the machine off before connecting or disconnecting the power cable!



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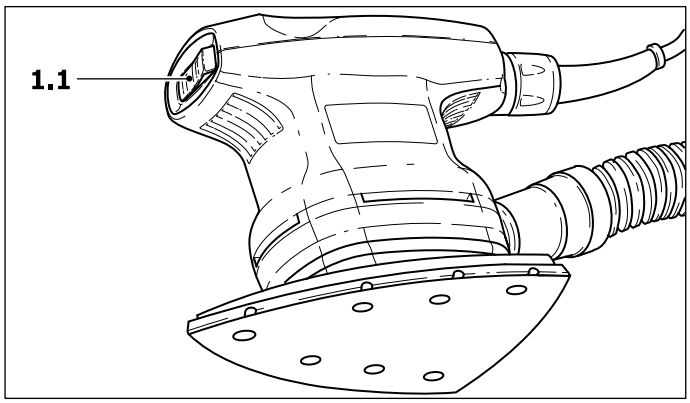
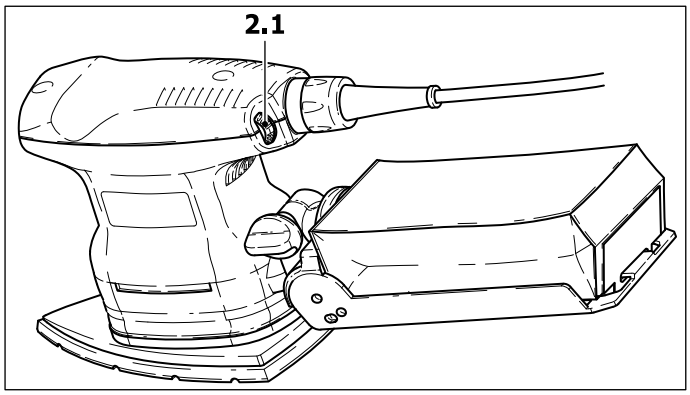
The switch (1.1) acts as an ON / OFF switch (I = ON / 0 = OFF).



4 Electronic control

The DS 400 EQ has an electronic control with which the rotational speed can be varied step-free.

This allows the sanding speed to be adapted to the optimum level according to the material concerned. The speed is set using the rotary control button (2.1).



The numbers on the rotary control button represent approximately the following strokes per minute:

strokes per min			
1	12 000	4	20 400
2	14 800	5	23 200
3	17 600	6	26 000

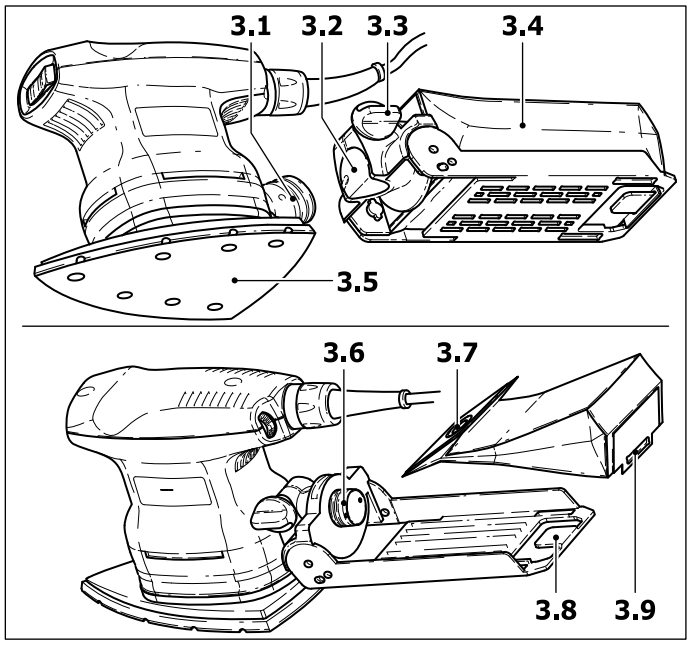
5 Dust extraction

Dust extractors prevent large accumulations of dust in the air in the working environment and dirt collecting in the workplace.

5.1 Inboard extraction

The machines are fitted with inbuilt extraction as standard. The sanding dust is extracted through suction openings in the sanding base (3.5) and trapped in the turbo-filter (3.4).

The turbo-filter has to be changed when it is so full of dust that the extraction power diminishes.



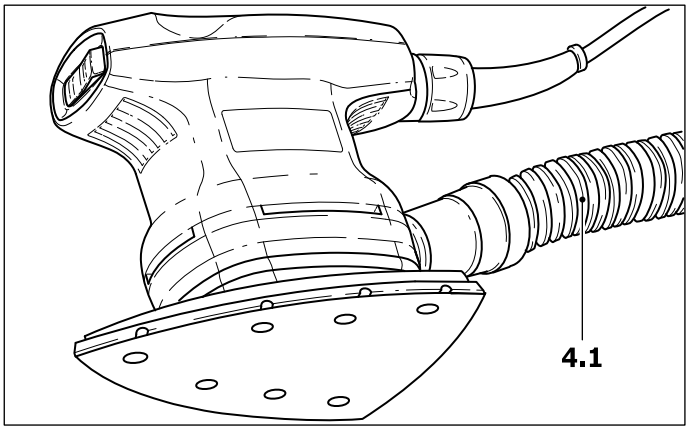
Inserting a turbo-filter

- Push the filter holder with its opening (3.2) as far as it will go onto the extraction nozzle (3.1) of the machine and clamp tight by turning rotary knob (3.3),
- push the front cardboard section of the turbo-filter with the sealing lip (3.7) onto the extraction nozzle (3.6) of the filter holder,
- insert rear cardboard section with slot (3.9) onto the retaining strip (3.8) of the filter holder.

5.2 External extraction by an extraction unit

In order to avoid frequent changing of the turbo-filter when carrying longer sanding jobs, it is possible to connect a Festool extractor to the unit instead of using inbuilt extraction.

In this case, the extraction pipe (Ø 27 mm (4.1)) of the extraction unit is connected to the suction nozzle.



6 Attaching sanding material

The appropriate Stickfix sanding paper and Stickfix sanding felt can be fastened quickly and easily onto the Stickfix sanding base.

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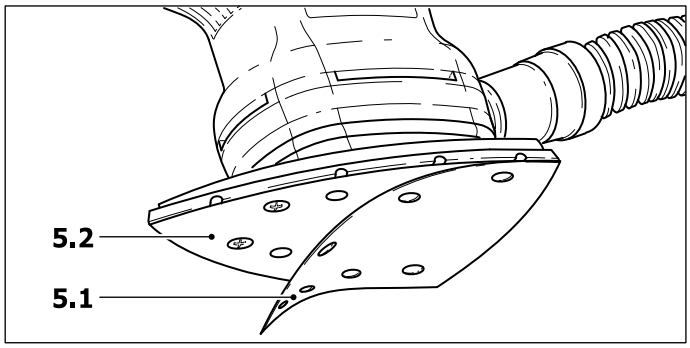

The self-adhesive sanding material (5.1) is simply pressed onto the sanding base (5.2) and held safely in place by the Stickfix sanding base velcro surface.

⚠CAUTION Always use original Festool sanding materials!

7 Operating instructions

⚠WARNING Never overload the tool by using too much pressure! The best sanding results are achieved when applying moderate pressure.

The sanding performance and quality depend mainly on the choice of the right sanding material. Festool offers the appropriate sanding material for all applications (see Festool catalogue).

We recommend the following settings on the rotary control (2.1) for electronic machines:

5 - 6

- sanding with max. drive
- sanding old paint
- sanding wood and veneer prior to painting
- interim sanding of paint on surfaces

4 - 5

- sanding of thinly applied primer
- sanding of wood with sanding vlies
- sanding edges on wooden parts
- smoothing primed wooden surfaces.

3 - 4

- sanding full wooden and veneer edges
- sanding in the grooves/rebates of windows and doors
- interim paint sanding on edges
- pre-sanding natural wood windows with sanding vlies
- smoothing wood surfaces with sanding felt prior to staining
- rubbing down stained surfaces with sanding vlies
- rubbing down or removing excess lime paste with sanding vlies

2 - 3

- interim paint sanding on stained surfaces
- cleaning natural wood window grooves with sanding felt

1 - 2

- sanding stained edges
- sanding thermoplastic synthetics

8 Maintenance and care

⚠WARNING Always remove the plug from the mains supply socket before carrying out any work on the machine!

The cooling air vents on the motor housing must always be free of blockages and clean to ensure air circulation.

Any maintenance or repair work requiring the motor housing to be opened may only be carried out by an authorised service workshop.

9 Warranty

Conditions of 1+2 Warranty

You are entitled to a free extended warranty (1 year +2 years =3 years) for your Festool power tool. Festool shall be responsible for all shipping costs during the first year of the warranty. During the second and third year of the warranty the customer is responsible for shipping the tool to Festool. Festool will pay for return shipping to the customer using UPS Ground Service. All warranty service is valid 3 years from the date of purchase on your receipt or invoice.

Festool Limited Warranty

This warranty is valid on the pre-condition that the tool is used and operated in compliance with the Festool operating instructions. Festool warrants, only to the original consumer purchaser, that the specified tool will be free from defects in materials and workmanship for a term of one year from the date of procurement. Festool makes no other warranty, express or implied, for Festool portable power tools. No agent, representative, distributor, dealer or employee of Festool has the authority to increase or otherwise change the obligations or limitations of this warranty. The obligations of Festool in its sole discretion under this warranty shall be limited to the repair or replacement of any Festool portable power tool that is found to be defective as packaged with the User Manual.

Excluded from coverage under this warranty are: normal wear and tear; damages caused by misuse, abuse or neglect; damage caused by anything other than defects in material and workmanship. This warranty does not apply to accessory items such as circular saw blades, drill bits, router bits, jigsaw blades, sanding

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belts, and grinding wheels. Also excluded are "wearing parts ",such as carbon brushes, lamellas of air tools, rubber collars and seals, sanding discs and pads, and batteries.

Festool portable power tools requiring replacement or repair are to be returned with the receipt of purchase to Festool (call 800-554-8741 for address details).

IN NO EVENT SHALL FESTOOL BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED WHATSOEVER. ALL WARRANTIES IMPLIED BY STATE LAW, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY LIMITED TO THE DURATION OF THREE YEARS.

Some states in the U.S. and some Canadian provinces do not allow the limitations on how long an implied warranty lasts, so the above limitation may not apply to you. With the exception of any warranties implied by state or province law as hereby limited, the foregoing express limited warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of Festool. This warranty gives you specific legal rights and you may also have other rights which vary from state to state in the U.S. and province to province in Canada.

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